anisotropic conductive layer or the anisotropic conductive film forming thermosetting adhesive 6b on the circuit board 4 side has been described. However, without being limited to this, the sheet or adhesive may be formed on the IC chip 1 side and thereafter bonded to the board 4 as shown in Fig. 14A or Fig. 14B. In the case of, in particular, the anisotropic conductive film sheet 10 that contains the thermosetting resin, it is acceptable to stick the anisotropic conductive film sheet 10 to the IC chip 1 along the configuration of the bumps 3 by pressing the IC chip 1 held by a holding member 200 such as a suction nozzle against an elastic body 117 such as rubber on a stage 201 together with a separator 6a removably arranged on the circuit board side of the anisotropic conductive film sheet 10.

(Third Embodiment)

A method and apparatus for mounting an electronic component of, for example, an IC chip on a circuit board and an electronic component unit or module of, for example, a semiconductor device in which the IC chip is mounted on the board by the mounting method, according to a third embodiment of the present invention will be described next with reference to Fig. 6A through Fig. 6C and Fig. 7A through Fig. 7F.

According to this third embodiment, instead of

sticking the anisotropic conductive film sheet 10 that contains a thermosetting resin onto the board 4 as in the first embodiment, an anisotropic conductive film forming thermosetting adhesive 6b that has a liquid form and serves as one example of the anisotropic conductive layer is applied or printed or transferred onto the circuit board 4 by a dispenser 502 or the like as shown in Fig. 6A and Figs. 7A and 7D and thereafter solidified into a semi-solid state, or the state of the so-called B stage. Subsequently, the IC chip 1 is mounted on the board 4 similarly to the first or second embodiment.

In detail, as shown in Fig. 6A, the anisotropic conductive film forming thermosetting adhesive 6b in the liquid form is applied or printed or transferred onto the circuit board 4 by the dispenser 502 or the like, which can be moved in two directions orthogonal on the board surface and the discharge rate of which is controlled with an air pressure as shown in Fig. 7A. Next, the adhesive is solidified into a semi-solid state, or the state of the so-called B stage as shown in Fig. 6C through uniforming with heat and pressure applied by a tool 78 that has a built-in heater 78a as shown in Fig. 6B.

Otherwise, in the case where the anisotropic conductive film forming thermosetting adhesive 6b in the liquid form has a low viscosity, the liquid thermosetting

adhesive 6b is applied to a specified position on the board 4 by means of the dispenser 502 as shown in Fig. 7A, and thereafter, the thermosetting adhesive 6b naturally spreads on the board since its viscosity is low and enters into a state as shown in Fig. 7B. Subsequently, by putting the board 4 into a furnace 503 by means of a conveying unit 505 like a conveyer as shown in Fig. 7C and hardening the liquid thermosetting adhesive 6b of the applied insulating resin by a heater 504 of the furnace 503, the adhesive is solidified into a semi-solid state, i.e., the state of the so-called B stage.

In the case where the anisotropic conductive film forming thermosetting adhesive 6b in the liquid form has a high viscosity, the liquid thermosetting adhesive 6b is applied to a specified position on the board 4 by means of the dispenser 502 as shown in Fig. 7D, and thereafter, the thermosetting adhesive 6b is spread flat by a squeegee 506 as shown in Figs. 7E and 7F since the adhesive does not naturally spread on the board due to the high viscosity of the thermosetting adhesive 6b. Subsequently, by putting the board 4 into the furnace 503 by means of the conveying unit 505 like a conveyer as shown in Fig. 7C and hardening the liquid thermosetting adhesive 6b of the applied insulating resin by the heater 504 of the furnace 503, the adhesive is solidified into the semi-solid state, i.e., the